

**STATE OF NEW YORK**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

Consolidated Edison Company                    )  
of New York, Inc. Electric Rates                    )

**Case 04-E-0572**

**DIRECT TESTIMONY OF**  
**PAUL CHERNICK**  
**ON BEHALF OF**  
**THE CITY OF NEW YORK**

Resource Insight, Inc.

**SEPTEMBER 10, 2004**

## TABLE OF CONTENTS

I.	Identification and Qualifications.....	1
II.	Introduction and Summary .....	4
III.	Resource Adequacy Issues.....	6
	A. Generation in the City Load Pocket .....	10
	B. Transmission into the City Load Pocket.....	13
	C. Facilitating Development of Distributed Resources .....	22
	D. Integrated T&D Planning.....	25
IV.	Performance Standards .....	27
V.	Streetlighting Performance Incentives.....	29
VI.	Coordination of Street Openings.....	34

## TABLE OF EXHIBITS

Exhibit\_\_\_\_PLC-1

*Professional Qualifications of Paul Chernick*

1    **I.    Identification and Qualifications**

2    **Q:   MR. CHERNICK, PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**  
3       **ADDRESS.**

4    A:   I am Paul L. Chernick. I am President of Resource Insight, Inc., 347 Broad-  
5       way, Cambridge, Massachusetts.

6    **Q:   SUMMARIZE YOUR PROFESSIONAL EDUCATION AND EXPERIENCE.**

7    A:   I received an SB degree from the Massachusetts Institute of Technology in June  
8       1974 from the Civil Engineering Department, and an SM degree from the  
9       Massachusetts Institute of Technology in February 1978 in technology and  
10      policy. I have been elected to membership in the civil engineering honorary  
11      society Chi Epsilon, and the engineering honor society Tau Beta Pi, and to  
12      associate membership in the research honorary society Sigma Xi.

13           I was a utility analyst for the Massachusetts Attorney General for more  
14      than three years, and was involved in numerous aspects of utility rate design,  
15      costing, load forecasting, and the evaluation of power supply options. Since  
16      1981, I have been a consultant in utility regulation and planning, first as a  
17      research associate at Analysis and Inference, after 1986 as president of PLC,  
18      Inc., and in my current position at Resource Insight. In these capacities, I have  
19      advised a variety of clients on utility matters.

20           My work has considered, among other things, the cost-effectiveness of  
21      prospective new generation plants and transmission lines, retrospective review  
22      of generation-planning decisions, ratemaking for plant under construction,  
23      ratemaking for excess and/or uneconomical plant entering service, conservation  
24      program design, cost recovery for utility efficiency programs, the valuation of  
25      environmental externalities from energy production and use, allocation of costs

1 of service between rate classes and jurisdictions, design of retail and wholesale  
2 rates, and performance-based ratemaking and cost recovery in restructured gas  
3 and electric industries. My professional qualifications are further summarized  
4 in Exhibit\_\_\_\_PLC-1.

5 **Q: DO YOU HAVE EXPERTISE IN PERFORMANCE-BASED RATEMAKING?**

6 A: Yes. In addition to the testimony about performance-based ratemaking that is  
7 described on my resume, I was co-author of NARUC's 1997 study, "Perform-  
8 ance-Based Regulation in a Restructured Utility Industry."

9 **Q: HAVE YOU TESTIFIED PREVIOUSLY IN UTILITY PROCEEDINGS?**

10 A: Yes. I have testified approximately one hundred and ninety times on utility  
11 issues before various regulatory, legislative, and judicial bodies, including the  
12 Arizona Commerce Commission, Connecticut Department of Public Utility  
13 Control, District of Columbia Public Service Commission, Florida Public  
14 Service Commission, Maryland Public Service Commission, Massachusetts  
15 Department of Public Utilities, Massachusetts Energy Facilities Siting Council,  
16 Michigan Public Service Commission, Minnesota Public Utilities Commission,  
17 Mississippi Public Service Commission, New Mexico Public Service Commis-  
18 sion, New Orleans City Council, North Carolina Utilities Commission, Public  
19 Utilities Commission of Ohio, Pennsylvania Public Utilities Commission,  
20 Rhode Island Public Utilities Commission, South Carolina Public Service Com-  
21 mission, Texas Public Utilities Commission, Utah Public Service Commission,  
22 Vermont Public Service Board, Washington Utilities and Transportation Com-  
23 mission, West Virginia Public Service Commission, Federal Energy Regulatory  
24 Commission, and the Atomic Safety and Licensing Board of the U.S. Nuclear  
25 Regulatory Commission.

1    **Q: HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE NEW YORK PUBLIC SERVICE**  
2    **COMMISSION?**

3    A: Yes. I have testified in the following cases:

- 4       • Case No. 96-E-0897, on the electric restructuring plan of the Consolidated
- 5       Edison Company of New York, Inc. (“Con Edison” or “the Company”).
- 6       • Case No. 99-W-0658, on the rates of United Water New Rochelle.
- 7       • Case No. 99-S-1621, on Con Edison’s steam rates.
- 8       • Case No. 00-E-1208, on the allocation of generation costs between New
- 9       York City and Westchester County.
- 10      • Cases No. 03-G-1671 on Con Edison’s gas rates and No. 03-S-1671 on
- 11      Con Edison’s steam rates.

12   **Q: HAVE YOU BEEN INVOLVED IN OTHER UTILITY-PLANNING ACTIVITIES IN NEW**  
13   **YORK?**

14   A: Yes.

- 15      • I co-authored “Comments on the 1991–1992 Annual and Long Range
- 16      Demand-Side-Management Plans of the Major Electric Utilities” (with
- 17      John Plunkett et al.), September 1990, filed in NY PSC Case No. 28223,
- 18      regarding New York utilities’ DSM plans.
- 19      • On behalf of environmental groups, I reviewed analyses of distributed
- 20      resources as alternatives to transmission investments for Orange and
- 21      Rockland Utilities’ Western Load Pocket Study (2000–2001) and Con
- 22      Edison’s Rainey to East 75<sup>th</sup> St. Project Distributed Resource Screening
- 23      Study (2000).
- 24      • I was the City’s representative to the Con Edison Steam Plant
- 25      Collaborative in 2001–2003.

- 1       • I was project manager and senior analyst for the New York City Energy  
2       Plan (December 2003), and provided technical assistance to New York  
3       City for the Energy Policy Task Force Report (January 2004).

4       **II. Introduction and Summary**

5       **Q: ON WHOSE BEHALF ARE YOU TESTIFYING?**

6       A: My testimony is sponsored by the City of New York.

7       **Q: WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

8       A: My testimony reviews aspects of Con Edison's planning for power supply and  
9       distribution service, its performance as a distribution provider to the City's  
10      streetlighting service, and its coordination with the City and other utilities.

11      **Q: WHAT ISSUES DO YOU ADDRESS?**

12      A: I address three issues related to the adequacy of resources for Con Edison's  
13      customers: Con Edison's role in promoting transmission into the New York City  
14      load pocket, facilitating development of distributed resources, and integrating  
15      distributed resources into transmission and distribution planning. I also discuss  
16      the need for performance standards for Con Edison's maintenance and repair of  
17      New York City's street and traffic lighting, improved billing practices for New  
18      York City's accounts and for coordination of street openings.

19      **Q: WHAT ARE YOUR RECOMMENDATIONS FOR THE COMMISSION IN THIS**  
20      **PROCEEDING?**

21      A: I recommend that the Commission take the following steps:

- 22      • Require Con Edison to consult with consumer groups and potential trans-  
23      mission providers and file a proposal for how it will support construction

- 1 of additional transmission into the New York City load pocket from New  
2 Jersey or Upstate.
- 3 • Encourage Con Edison to facilitate development of distributed resources  
4 in its territory, to integrate fully distributed resources into T&D planning,  
5 and to continue and expand the efforts it started in the June 2003 DSM RFP.
  - 6 • Require that Con Edison compute streetlighting and traffic-signal charges  
7 under its PASNY tariff in compliance with Special Provision 6 (A)(2) of  
8 that tariff, so that the facilities charges apply only to connections that are  
9 properly energized as of the 15<sup>th</sup> of the month.
  - 10 • Establish tariff penalties if Con Edison fails to permanently restore electric  
11 service to streetlights and traffic signals, without temporary overhead  
12 shunts, within 45 days of receiving notice of an outage.
  - 13 • Order Con Edison to develop, in conjunction with New York City's  
14 Department of Transportation, and then deploy, within six months of an  
15 Order in the proceeding, a corrected, automated register of City streetlights  
16 and traffic signals.
  - 17 • Instruct Staff (with input from interested parties) to design performance  
18 penalties to be applied if Con Edison fails to maintain an updated City  
19 streetlight register or if it fails to hook up new streetlights and traffic  
20 signals within 90 days of receiving notice of the installation of new  
21 equipment.
  - 22 • Form a street-opening coordination group that would work closely with the  
23 City to attempt to minimize the disruption associated with street openings,  
24 and the costs associated with those openings. Among other things, the  
25 coordination group should report to the Commission on the progress and  
26 achievements of the coordination group at least every three months.

1     **III. Resource Adequacy Issues**

2     **Q: DOES CON EDISON’S SERVICE TERRITORY HAVE ADEQUATE ELECTRIC**  
3     **POWER RESOURCES FOR THE FORESEEABLE FUTURE?**

4     A: No. The supply of power to the New York City load pocket is barely adequate  
5     over the next few years. The supply of capacity and energy is far from the  
6     economical optimum for electricity consumers in the City.

7             The New York City market had capacity in 2003 barely equal to the  
8     minimum 80% of peak load required for reliable service, and then only by  
9     including emergency generation and other special-case resources.<sup>1</sup> The 2004  
10    Gold Book projects another 1,376 MW of load growth in Zone J from 2003 to  
11    2013, which would require 1,100 MW of in-City capacity.<sup>2</sup> In addition, Con  
12    Edison is retiring 65 MW of summer capacity at Hudson Ave 10 this year and  
13    NYPA is required to remove the 882 MW at the existing Poletti plant sometime  
14    between 2008 and 2010. By 2013, New York City will need more than 2,000  
15    MW of new resources just to maintain the marginal supply balance of 2003.

16            The following table shows the load and capacity situation for the City load  
17    pocket (Zone J) for each year, based on the loads, additions and retirements in  
18    the 2004 Gold Book and the 2004 summer capability from the Locational  
19    Installed Capacity Requirements Study (NY ISO Operating Committee February  
20    20, 2004).

---

<sup>1</sup>“Locational Installed Capacity Requirements Study Covering the New York Control Area for the 2003–2004 Capability Year,” approved by the NY ISO Operating Committee, February 12, 2003.

<sup>2</sup>Load and Capacity Data, New York ISO, 2004, Table I-2.



1           **Zone J Load and Capacity Balance (MW)**

	<b>Peak Load</b>	<b>ICAP required</b>	<b>ICAP available</b>	<b>Retirements</b>	<b>Additions</b>	<b>Net Position</b>
2004	11,150	8,920	9,074			154
2005	11,365	9,092	9,636	-226	788	544
2006	11,535	9,228	10,136		500	908
2007	11,680	9,344	10,136			792
2008	11,820	9,456	10,136			680
2009	11,975	9,580	9,254	-882		-326
2010	12,117	9,694	9,254			-440
2011	12,244	9,795	9,254			-541
2012	12,319	9,855	9,254			-601
2013	12,396	9,917	9,254			-663

2           The City starts with a net surplus of 154 MW, and the surplus rises as the  
3           remaining generation in the pipeline enters service through 2006, and then falls  
4           with load growth. The retirement of the old Poletti plant, whether that occurs in  
5           2008 or 2010, would put Zone J into a deficit position.

6           In addition, the New York City Energy Policy Task Force Report suggests  
7           that a further 1,000 MW of resources be added by 2008 to moderate prices in the  
8           electric energy and capacity markets, and 2,115 MW to replace aging generation  
9           (950 MW of which would be needed to replace Hudson Avenue 10 and Poletti).<sup>3</sup>  
10          Complying with those recommendations would require a total of about 4,200  
11          MW by 2013.

12          The additional resources to reduce locational prices are needed throughout  
13          the forecast period, especially as the resource surplus dwindles after 2006.  
14          Retirement of the older units would be environmentally desirable at any time,  
15          and may occur at any time, depending on the performance of the units and the  
16          cost of maintaining them in service.

---

<sup>3</sup>New York City Energy Policy: An Electricity Resource Roadmap, New York City Energy Policy Task Force, January 2004.

1 In comparison, the principal supply resources added since 2003, and those  
2 currently under construction, are as follows:

- 3 • KeySpan's Ravenswood addition (250 MW), which entered service in early  
4 2004,
- 5 • Con Edison's East River Project (125 MW net of the retirement of  
6 Waterside), expected to be in operation by summer 2005,
- 7 • NYPA's Poletti combined-cycle plant (500 MW), expected to be in operation  
8 by summer 2005, and
- 9 • SCS Astoria's first phase, under contract to Con Edison (500 MW), planned  
10 for service by 2006.

11 These supply resources total 1,375 MW. The Energy Policy Task Force  
12 report also projects that 300 MW of demand-side resources would be added by  
13 2008 with existing efforts; by 2013, that value might be 600 MW, if current  
14 programs continue.

15 **Q: HOW DO THE RESOURCE ADDITIONS COMPARE TO THE RESOURCES NEEDED?**

16 A: The 1,975 MW of planned and projected resource additions is only about half the  
17 4,200 MW needed.

18 **Q: WHAT COULD CON EDISON DO TO IMPROVE THIS SITUATION?**

19 A: Con Edison should seek ways to facilitate the addition of generation within the  
20 New York City load pocket, the addition of transmission capacity into the City,  
21 and the reduction of loads in the City in order to increase reliability and decrease  
22 the market cost of power.

23 The New York City Energy Policy Task Force concluded that:

1 To ensure reliability, to promote economic growth, and to address environ-  
2 mental issues, the Task Force concludes that the City needs 2,600 mega-  
3 watts of new electricity resources by 2008. The best way to meet this goal  
4 will be through a combination of generation plants (both new and  
5 repowered), transmission lines, and distributed resources—including clean  
6 on-site generation and various methods of energy efficiency and demand  
7 reduction. (New York City Energy Policy: An Electricity Resource  
8 Roadmap, January 2004, at 1–2)

9 Con Edison has taken important steps to support the generation market in  
10 New York City, such as the RFP it issued that resulted in the SCS contract.  
11 Further, similar RFPs may be needed. There are three additional areas in which  
12 Con Edison could be more active: support for new transmission lines into the  
13 City, support for DSM and distributed generation City-wide, and greater  
14 integration of those distributed resources into transmission and distribution  
15 planning.

16 **Q: WHAT ARE THE BENEFITS AND COSTS OF A COMMITMENT BY CON EDISON TO**  
17 **EXPAND RESOURCES IN THE CITY?**

18 A: The costs are whatever Con Edison and its customers (including NYPA  
19 customers for whom Con Edison provides delivery service) must invest or  
20 commit to pay to achieve the resource additions. The benefits are as follows:

- 21 • The change in energy market prices in the City, times the amount of market  
22 energy purchased by all in-City customers.
- 23 • The change in market capacity prices in the City, times the amount of in-  
24 City market capacity purchased by all in-City customers.
- 25 • The market value of energy and capacity produced or avoided by the  
26 generation resource (including avoided losses and reserves).
- 27 • The local transmission and distribution costs avoided or deferred by distri-  
28 buted resources (and in some cases, transmission avoided by appropriately  
29 located in-City generation, such as the East River Repowering Project).

- 1       • Reductions in air pollution due to reduced generation from older plants in  
2       the City.

3    **A.   *Generation in the City Load Pocket***

4    **Q:   WHAT HAS CON EDISON DONE TO INCREASE THE SUPPLY OF MAJOR ELECTRIC**  
5       **GENERATION IN THE CITY LOAD LOCKET?**

6    A:   Con Edison has taken two important actions. First, it is building the East River  
7       Repowering Project (ERRP), a 288-MW cogenerator replacing the 166 MW  
8       Waterside plant, for a net gain of 122 MW. The ERRP is expected to be on line  
9       before the summer of 2005.

10           Second, Con Edison has contracted with SCS Astoria Energy LLC for 500  
11       MW of capacity from the SCS Astoria plant. That contract resulted from Con  
12       Edison's request for proposals for in-City generation assets. In April 2003, Con  
13       Edison selected SCS (which had received Article-X certification in November  
14       2001 for 1,000 MW). This step facilitated financing of 500 MW of the plant  
15       earlier this year, and construction has begun. Additional RFP rounds for in-City  
16       generation may be necessary to provide enough revenue stability to assure  
17       completion of further generation, including resources that have already received  
18       their major licenses, such as the second SCS Astoria 500 MW unit, the repower-  
19       ing of Reliant's Astoria plant, and PSEG's Cross-Hudson dedicated generator  
20       feed—which would move allow an existing PSEG New Jersey unit to be treated  
21       as in-City generation.<sup>4</sup>

22   **Q:   HAS THIS INVOLVEMENT IN THE GENERATION MARKET BEEN NECESSARY?**

---

<sup>4</sup>The Cogen-Tech plant in Linden NJ has just such a dedicated transmission line, and is treated by the NY ISO as in-City capacity.

1 A: Yes. Of the generation in the City load pocket that began construction since  
2 restructuring, Con Edison is responsible for the 788 MW being built at ERRP and  
3 SCS Astoria, while NYPA has built 475 MW of combustion turbines and is  
4 building the 500-MW Poletti combined-cycle plant, for a total of 975 MW. The  
5 only significant generation added in the City without the support of either Con  
6 Edison or NYPA is the 270-MW Ravenswood unit.<sup>5</sup>

7 **Q: WOULD ADDING ALL OF THE REMAINING 2,000 MW OR MORE THROUGH**  
8 **GENERATION ADDITIONS BE FEASIBLE AND PRUDENT?**

9 A: Adding that much additional generating capacity in the City is certainly feasible  
10 as an engineering matter. In more practical terms, siting a new power plant in  
11 the City is expensive and difficult, due to environmental and land-use conflicts.  
12 Nonetheless, approximately 1,600 MW of additional supply has received siting  
13 certification, as follows:

- 14 • The second 500-MW unit of SCS Astoria;
- 15 • The repowering of Reliant's Astoria plant, which would add about 540 net  
16 megawatts;
- 17 • PSEG's 550-MW Cross-Hudson Project.

18 **Q: SHOULD NEW GENERATION BE THE ONLY MEANS OF SATISFYING PROJECTED**  
19 **IN-CITY NEEDS?**

20 A: No. Even if suitable sites could be found for additional in-City generation, two  
21 drawbacks would remain for an all-generation approach. First, Con Edison's  
22 power supply would be even more dependent on in-City gas-fired generation,  
23 served by a small number of pipeline connections into the City. Operational

---

<sup>5</sup>Reliant also restored to service the previously mothballed the 169-MW Astoria-2 unit, and Con Edison temporarily reactivated the mothballed 66-MW Hudson Avenue. A few merchant combustion turbines have been announced, but it is not clear that any of them are under construction.

1 problems on a major pipeline could thus have serious effects on the reliability  
2 of electric supply.

3 Second, building new in-City generation has proven to be very expensive,  
4 as illustrated by the table below:

5 **Announced Costs of Recent Plants**

	<b>Latest Construction- Cost Estimate</b>	<b>Capacity (MW)</b>	<b>Cost per kW</b>
<i>NYPA turbines</i>	\$640 M	500	\$1,280
<i>SCS Astoria<sup>a</sup></i>	\$983 M	500	\$1,966
<i>ERRP (electric costs only)</i>	\$447 M	288	\$1,551
<i>Poletti Expansion</i>	\$650 M	500	\$1,300
<i>Ravenswood</i>	\$360 M	270	\$1,333

<sup>a</sup> *The cost of the first phase of Astoria may include costs  
related to the second unit planned for the plant.*

6 In 2000, the previous owner of the Reliant Astoria plant projected a cost  
7 of \$750 million for repowering the plant. At about \$14/kWh, this would be a  
8 very low cost for an 1,800 MW plant, but would be about \$1,400/kW for the  
9 incremental 540 MW.<sup>6</sup>

10 Other resources, such as new transmission lines and distributed resources,  
11 can provide greater supply diversity, improved flexibility, and lower cost than  
12 an expansion plan relying entirely on in-City generation. The New York City  
13 Energy Plan, for example, found that the least-cost resource plan included DSM  
14 and transmission from PJM and Upstate, although additional in-City generation  
15 was very close to the net benefits provided by the transmission options.<sup>7</sup>

---

<sup>6</sup>The actual cost is likely to exceed \$750 million.

<sup>7</sup>Energy Plan for the City of New York, December 23, 2003, at 24, 29.

1    **B.    Transmission into the City Load Pocket**

2    **Q:    WHY HASN'T THE COMPETITIVE MARKET DONE MORE TO DEVELOP TRANS-**  
3       **MISSION INTO THE NEW YORK CITY LOAD POCKET?**

4    A:    The basic problem lies in the model under which merchant transmission projects  
5       would be built in the restructured New York market. The transmission developer  
6       is expected to make capacity on its line available to power suppliers, who will  
7       pay for the capacity in order to be able to transport energy and capacity  
8       purchased in a low-cost area at one end of the line for use in a high-cost area at  
9       the other end of the line.<sup>8</sup> The problem is that, under NY ISO's location-based  
10      marginal pricing approach, building a large transmission link between two areas  
11      can drastically reduce or eliminate the locational differential in market prices  
12      that creates the value of the line.

13   **Q:    IS THIS PROBLEM SIMPLY ONE OF PRICE UNCERTAINTY?**

14   A:    No. All merchant supply projects face uncertainties in market prices, as do third-  
15      party suppliers and consumers. The purchasers of capacity in a small transmis-  
16      sion addition (say, 50 MW from Upstate to New York City, were that feasible)  
17      would face uncertainty regarding the differential between Upstate and in-City  
18      prices, but those differentials may be larger or smaller than currently forecasted.  
19      The developer of a new merchant plant in the City also faces risks related to fuel  
20      prices, demand levels, and other supply additions, and must recognize that its  
21      operation will tend to reduce prices. However, at least the generator knows that  
22      the energy and capacity it will provide will have some value.<sup>9</sup> A large

---

<sup>8</sup>Even this model works only for DC lines. Determining the power flows due to the addition of an AC line is much more difficult.

<sup>9</sup>Even so, the market risks, along with the tight credit market, appear to have suppressed development of merchant generation in the City and to some extent in the rest of New York State.

1 transmission project, on the other hand, might bring market prices in the City  
2 so close to prices outside the City that the project would be essentially worthless  
3 to the owners of the transmission capacity.

4 **Q: CAN YOU PROVIDE AN ILLUSTRATION OF THIS EFFECT?**

5 A: Yes. The NY ISO administratively sets capacity prices for New York City and the  
6 Rest of State (ROS) using “demand curves” that set the price as a linear function  
7 of the ratio of (1) capacity bid into the ISO capacity auctions to (2) load in the  
8 region.

9 For New York City, the price was set (after a phase-in period) to be  
10 \$159/kW-yr if capacity is 80% of load, ramping down by \$11/kW-yr. for each  
11 1% increase in the capacity-to-load ratio, reaching zero at 94.4%. The ratio  
12 would also grow by \$11/kW-yr. for every 1% that the ratio rose above 80%. The  
13 ROS price was set at \$85/kW-yr. at the targeted 118% reserve margin, falling  
14 \$6/kW-yr for each 1% increment to the ratio, reaching zero at 132%. A recent  
15 study for the ISO has recommended reducing the in-City reference price at 80%  
16 to \$128/kW-yr, and raising the ROS price at 118% to \$109/kW-yr, both for  
17 2005.<sup>10</sup> It is not clear whether the NY ISO will adopt the proposed prices, or  
18 whether they will be approved by FERC.

19 **Q: CAN YOU PROVIDE AN EXAMPLE OF THE EFFECT OF A MAJOR TRANSMISSION**  
20 **LINE ON DIFFERENTIALS IN ZONAL PRICES?**

21 A: By 2008, in-City resources (including those in the pipeline) minus expected  
22 retirements, will be roughly 9,500 MW. This is barely more than the 80%  
23 requirement and would lead to a capacity price of about \$150/kW in the City  
24 under the current demand curve. The 2004 NY ISO Gold Book projects statewide

---

<sup>10</sup>Independent Study to Establish Parameters of the ICAP Demand Curves for the New York Independent System Operator, Levitan Associates, August 16 2004, at ii.



1 reserve margins of more than 32% in 2008, in which case the demand-curve  
2 price would be zero.<sup>11</sup> The Gold Book includes a number of proposed plants that  
3 are not under construction or under contract (e.g., Cross-Hudson, the second  
4 unit of SCS Astoria, Liberty Generation, TransGas, repowering of Reliant's  
5 Astoria plant, Wawayanda and Glendale); removing those resources, and  
6 updating the Zone K resources to reflect the major resources selected in the LIPA  
7 Energy Plan for 2005 and 2007 operation gives a 2008 statewide reserve margin  
8 of 27%. Under the adopted demand curve, the ROS price would be about  
9 \$30/kW-yr.

10 With only the committed resources, Con Edison and NYPA would have  
11 about 3,100 MW of in-City capacity (including the SCS Astoria contract),  
12 leaving about 6,400 MW of in-City capacity to be purchased from the market. At  
13 \$150/kW, that would cost nearly a billion dollars.

14 Now consider the effect of adding DC transmission from Upstate, or PJM,  
15 into the City. The ISO would apparently treat the in-City DC converter as a  
16 power plant, contributing to in-City capacity. Adding 1,000 MW of transmission  
17 into the City would reduce the in-City price to about \$60/kW-yr. Buying 6,400  
18 MW at \$60/kW-yr would cost about \$380 million. Customer electric bills in the  
19 City would fall by about \$600 million.

20 **Q: WOULD THE OWNERS OF THE TRANSMISSION RIGHTS BE ABLE TO CAPTURE**  
21 **SOME OF THOSE SAVINGS TO PAY FOR THEIR SHARE OF THE LINE?**

22 **A:** No. The 1,000 MW imported through the transmission could be purchased for  
23 the Upstate price and sold in the City at the in-City market price. That difference

---

<sup>11</sup>If reserve margins were to be that high, some generators are likely to be retired or mothballed, leaving the capacity price significantly above zero.

1 in our example would be \$30/kW-yr, or about \$30 million. That's about 5% of  
2 the benefits.

3 **Q: DON'T CONSUMERS BENEFIT FROM THE INABILITY OF THE TRANSMISSION**  
4 **OWNERS TO RETAIN THE SAVINGS FROM THE LINE?**

5 A: Consumers would benefit, if the line could get built. But no merchant  
6 transmission line has been built in New York, other than the Transenergie  
7 Cross-Sound Cable. Long Island Power Authority purchased all of that line's  
8 capacity prior to its construction. Neither potential developers nor third-party  
9 power suppliers are interested in investing in a transmission project that will  
10 provide benefits primarily to other parties, including their competitors.

11 **Q: HOW WOULD THE RESULTS CHANGE FOR A LARGER TRANSMISSION LINE?**

12 A: In the example I described above for 2008, adding 2,000 MW of additional  
13 transmission would raise the capacity ratio to 98%, eliminate the in-City load  
14 pocket for capacity purposes, and save in-City consumers about \$770 million  
15 annually. The capacity value of the line would be zero, because capacity prices  
16 would be the same Upstate and in the City.

17 **Q: HOW WOULD THESE RESULTS CHANGE FOR THE DEMAND CURVES PROPOSED**  
18 **BY THE ISO CONSULTANT ?**

19 A: The benefits of increased transmission for consumers would be reduced, but  
20 would remain substantial. With the reserve margins derived above for the  
21 planned resources and the proposed demand curves, the in-City price would be  
22 about \$128/kW-yr and the ROS price would be about \$35/kW-yr. Adding 1,000  
23 MW of HVDC transmission would bring the in-City price down to \$48/kW-yr. In-  
24 City consumers would pay about \$820 million with the planned resources, \$307  
25 million with 1,000 MW of transmission, and \$224 million with 2,000 MW of

1 transmission. With the 1,000-MW line, the transmission rights holders would be  
2 able to charge about \$13 million, less than 3% of the benefits to consumers.

3 **Q: WOULD THE SITUATION BE VERY DIFFERENT FOR ENERGY PRICES THAN FOR**  
4 **CAPACITY?**

5 A: No. The same factors would operate, although the in-City differential in energy  
6 prices would not disappear with even 2,000 MW of transmission.

7 **Q: HOW DOES THIS SITUATION DIFFER FROM HISTORICAL NORMS?**

8 A: In the past, if Con Edison found that building a transmission facility would  
9 reduce total costs to its customers, it could seek the necessary approvals and  
10 build the facility. Con Edison's customers paid for the transmission facilities  
11 through their rates. Indeed, most of the transmission costs currently charged to  
12 customers result from the facilities built or contracted by Con Edison prior to  
13 restructuring.

14 If we were still in the pre-restructuring world, with recent advances in DC  
15 transmission technology, Con Edison would likely be considering options for  
16 building transmission lines to connect the City load pocket to various Upstate  
17 locations and to PJM. Con Edison might well be reviewing the tradeoffs between  
18 building a line itself, contracting with a developer to build it as a turnkey  
19 project, or contracting for capacity in a line to be built and operated by another  
20 party.

21 **Q: ARE THOSE OPTIONS STILL AVAILABLE?**

22 A: Yes, but in a modified way. Because Con Edison has indicated no interest in  
23 building new interconnections, and FERC appears to prefer that new lines be  
24 developed as merchant transmission, the most attractive option may be for Con  
25 Edison to contract for capacity on a new transmission line. Contracting for capa-  
26 city on a merchant transmission line could be accomplished by a process very

1 similar to (1) Con Edison's RFP that resulted in the SCS contract, (2) NYPA's  
2 500-MW solicitation for in-City generation supply, and (3) LIPA's RFPs that  
3 resulted in its selecting TransEnergie for a transmission line from Connecticut,  
4 Neptune for a transmission line from New Jersey, and FPL Energy, PPL Global,  
5 Global Common, Calpine, Pinelawn Power, and Caithness for construction of  
6 generation.<sup>12</sup>

7 In addition, Con Edison should continue investigating options for using  
8 new technologies to increase deliveries over the existing alternating-current  
9 transmission system into the City.

10 **Q: IS SOME SUCH INTERVENTION NECESSARY?**

11 A: The fact that utility financing or contracting has been necessary for most  
12 development of in-City generation and all transmission expansion in New York  
13 State strongly indicates that existing market incentives are not sufficient to get  
14 additional transmission built into the City.

15 Once it was clear that the markets were not providing sufficient incentives  
16 to bring new generation—even generation that had been successfully  
17 permitted—on line in the City, Con Edison and NYPA took steps (through the  
18 RFP process) to utilize the new market structure to ensure that plants were built.  
19 The market structures have similarly failed to foster the construction of  
20 transmission, so it may be time for Con Edison to try the same approaches with  
21 transmission that it has taken with respect to generation.

22 **Q: HOW WOULD RECENT NY ISO ACTIONS AFFECT THE PROCESS OF ACQUISI-**  
23 **TION OF NEW TRANSMISSION CAPACITY BY CON EDISON?**

---

<sup>12</sup>LIPA has also issued an RFP for renewables and NYPA has issued an RFP for in-City capacity.

1 A: The NY ISO recently filed with FERC a “comprehensive planning process...to  
2 resolve reliability issues.”<sup>13</sup> That process would consist of identification of a  
3 reliability need, solicitation of market-based solutions, and, if that solicitation  
4 fails, construction of transmission by transmission-owning utilities. The NY ISO  
5 proposal does not appear to preclude development of either reliability related or  
6 cost-driven transmission projects by market-based developers, including  
7 development driven by an RFP from a load-serving entity and transmission  
8 owner, such as Con Edison.

9 To avoid conflicting with NYISO’s planning process, Con Edison should  
10 certainly inform NY ISO of its plans for soliciting transmission capacity, and  
11 request NY ISO’s assistance in designing the solicitation. The identification of a  
12 reliability need for in-City supply in 2008 is relatively straightforward, and in  
13 any case there are non-reliability benefits of additional transmission: reduced  
14 market prices, increased supply diversity, reduced air pollution and reduced  
15 need for in-City generation to compete for scarce sites with other infrastructure  
16 projects (the City’s own transportation, solid-waste, water and waste-water  
17 projects face similar siting difficulties). These needs have been obvious for  
18 years, and a number of merchant transmission projects have been proposed, but  
19 none have been built, so it is clear that some arrangement beyond the existing  
20 market rules may be necessary to get transmission built. Hence, in order to meet  
21 growing capacity needs, Con Edison should begin to move rapidly to issue a  
22 transmission capacity RFP during 2005.

23 **Q: WHAT SORT OF TRANSMISSION PROJECTS MIGHT RESPOND TO SUCH AN RFP?**

---

<sup>13</sup>NYISO filing of proposed revisions regarding the comprehensive reliability planning process and an agreement stating rights and responsibilities of NYISO and NYTOs, FERC ER04-1144-000,, August 20, 2004.

1 A: I am aware of high-voltage DC transmission projects that have been proposed to  
2 bring additional power to the City from three regions as follows::

3 1. The Empire Connection proposed by Conjunction, LLC, which would  
4 consist of two circuits, each carrying 1,000 MW of capacity from Albany  
5 to lower Manhattan.

6 2. The Niagara Reinforcement Project proposed by Pegasus Power Systems  
7 would carry 1,200–1,800 MW (depending on final design) from NYPA’s  
8 Marcy substation to West 49<sup>th</sup> Street, and another 1,200 MW to PSEG’s  
9 Hudson substation.

10 3. A number of transmission lines proposed to run from New Jersey to New  
11 York City, including the following projects:

12 • A TransEnergie proposal for a 660-MW line from PJM to West 49<sup>th</sup>  
13 Street or Farragut.<sup>14</sup>

14 • A similar proposal by PG&E Liberty Generating.

15 • The Neptune Phase-1 Project, for 600 MW of DC transmission  
16 capacity from Linden substation in New Jersey to W. 49<sup>th</sup> Street  
17 substation, and a similar amount from Sayreville substation in New  
18 Jersey to either Con Edison’s W. 49<sup>th</sup> Street or Farragut substations,  
19 or to LIPA’s Newbridge substation.

20 In addition, PSEG Power has received most of the approvals necessary to  
21 build the Cross-Hudson tie from Linden to West 49<sup>th</sup> Street, which would  
22 connect a PSEG generator solely to the City, thus qualifying that plant as 550  
23 MW of in-City capacity.

---

<sup>14</sup>TransEnergie later proposed terminating the line at the Rainey substation in Long Island City.

1   **Q: WOULD ALL THESE TRANSMISSION PROJECTS BE EQUALLY VALUABLE FOR**  
2   **CITY ELECTRIC CONSUMERS?**

3   A: No. The size of the projects differ, and the costs will almost certainly differ as  
4   well. The projects would connect New York City to different areas, with at least  
5   three different energy markets and two capacity markets.

6           The energy benefit of each line can only be determined by running a multi-  
7   area production-costing model with alternative transmission configurations. The  
8   capacity benefits of connections within the NY ISO can be estimated from the  
9   demand curves, although that requires assumptions about future demand curves  
10   and hence the costs of new capacity and the decisions of the NY ISO and FERC.  
11   The capacity benefits of a line to New Jersey requires modeling and forecasting  
12   of the capacity market in PJM, including the effect of the line on the market price  
13   in PJM. The various benefits of each proposal need to be weighed against the  
14   cost of the financial commitment required by the developer.

15   **Q: WHAT ACTIONS SHOULD THE COMMISSION ORDER CON EDISON TO UNDER-**  
16   **TAKE TO SUPPORT THE DEVELOPMENT OF TRANSMISSION INTO THE IN-CITY**  
17   **LOAD POCKET?**

18   A: Con Edison should meet with the City and other consumer representatives and  
19   potential transmission providers to discuss the most appropriate nature of that  
20   support, which may be an RFP for transmission capacity or some form of  
21   guarantee. The Commission should require that Con Edison file a recommended  
22   plan for supporting development of transmission within six months of the  
23   issuance of the order in this proceeding. Of course, Con Edison should retain the  
24   right to reject all offers that do not meet reliability needs and provide net  
25   benefits to the consumer.

1    **C.   *Facilitating Development of Distributed Resources***

2    **Q:   WHAT DISTRIBUTED RESOURCES SHOULD CON EDISON SUPPORT ACROSS ITS**  
3       **SERVICE TERRITORY?**

4    A:   Con Edison should support increases in cost-effective end-use energy efficiency  
5       (demand-side management, or DSM) and clean distributed generation, including  
6       photovoltaics and small gas-fuel cogeneration applications. Con Edison should  
7       also be working to reduce barriers to cost-effective distributed generation, such  
8       as by promptly providing information on interconnection availability, require-  
9       ments and costs and correcting distribution limitations that impede development  
10      of distributed generation.

11   **Q:   WHAT ARE THE BENEFITS OF DISTRIBUTED RESOURCES?**

12   A:   These resources reduce the following:

- 13       •   the amount of generation energy and capacity that Con Edison customers  
14       need to purchase,  
15       •   the demand for and price of market purchases of energy and capacity,  
16       •   losses in the Con Edison T&D system,  
17       •   the need for Con Edison investments to achieve load relief on its T&D  
18       system.

19   **Q:   HOW MUCH LOAD RELIEF SHOULD CON EDISON AIM TO ACHIEVE FROM**  
20       **DISTRIBUTED RESOURCES?**

21   A:   Con Edison should attempt to harvest as much cost-effective DSM and dis-  
22       tributed generation as possible. The New York City Energy Policy Task Force  
23       Report, based on NYSERDA studies, estimates that an additional 568 MW of load  
24       reduction is achievable in the City by 2008, plus another 200 MW of clean  
25       distributed generation.



1   **Q: WHY IS IT APPROPRIATE FOR CON EDISON TO BE INVOLVED IN PROMOTING**  
2       **DISTRIBUTED RESOURCES, IN ADDITION TO NYSERDA'S PROGRAMS FUNDED**  
3       **BY THE SYSTEMS BENEFIT CHARGE?**

4   A: The NYSERDA programs may not capture all cost-effective distributed resources,  
5       due to the scope of the programs and the budgetary constraints of the System  
6       Benefits Charge. This situation is particularly likely to arise in the City, with its  
7       higher energy and capacity costs, and the high sensitivity of market prices to the  
8       load-capacity balance.

9           In addition, Con Edison has an established and continuing relationship  
10       with each customer, as the local distribution utility, which cannot be duplicated  
11       by NYSERDA and the energy service companies that deliver most NYSERDA DSM  
12       programs. While consumers may have conflicted relationships with Con Edison,  
13       they know that the Company will continue to operate for a very long time, and  
14       will be easy to find if some follow-up is required. Further, any customer who is  
15       constructing a new building, adding load to an existing building, or considering  
16       adding distributed generation will need to work with Con Edison. The Company  
17       is intimately familiar with the building stock in its service territory, the pre-  
18       restructuring DSM investments at each facility, and the consumption patterns of  
19       each customer. Con Edison is also the only entity that can identify substations  
20       with fault-current limitations that would impede development of cost-effective  
21       distributed generation and that can prioritize upgrading those substations.<sup>15</sup>

22           As a result, Con Edison is in a unique position to identify distributed-  
23       resource opportunities and serve as a sales and marketing channel for NYSERDA

---

<sup>15</sup>As matters now stand, Con Edison may be forced to build a new substation because fault-current limitations at existing substations preclude the development of distributed generation. Con Edison has budgeted fault-current upgrades for the existing substations, but the improvements may come too late to allow the distributed generation to defer the new substation.

1 programs, while supplementing those programs to reflect the higher values of  
2 load reductions in its service territory and promoting implementation where  
3 reductions will be most valuable. I expect that most of these functions could be  
4 carried out with existing Con Edison resources

5 **Q: HOW WOULD CON EDISON RECOVER ITS COSTS OF FACILITATING DEVELOP-**  
6 **MENT OF DISTRIBUTED RESOURCES?**

7 A: Con Edison should be able to recover its prudent, incremental expenditures on  
8 distributed resources, as well as the lost revenues (net of avoided expenditures)  
9 resulting from its efforts, and perhaps even a modest incentive for exceptional  
10 efforts and effectiveness. Incremental cost recovery would not include the costs  
11 of Con Edison's efforts carried out by existing customer representatives, distri-  
12 bution engineers, forecasters, and other staff already paid for by ratepayers.  
13 Defining incremental costs should be straightforward for most large cost  
14 categories, such as the costs of contractors to identify customers who are good  
15 prospects for installation of distributed resource, assist those customers in  
16 selecting measures and energy service companies to implement them, and  
17 provide quality control and integration between implementers. If Con Edison  
18 needs to increase spending between rate cases for costs that are harder to  
19 segregate, such as internal staff, it should work with the Commission Staff and  
20 interested parties to develop appropriate baseline expenditures and rules to  
21 identify costs related to facilitating development of distributed resources.

22 The costs could be recovered through Con Edison's Monthly Adjustment  
23 Charge (as proposed by Con Edison witness Louis Cedrone, and in Con Edison's  
24 filing in Case 03-E-1332) or deferred to the next rate case, subject to regulatory  
25 review. Deferral would allow for greater regulatory review, which may be  
26 particularly important for the computation of lost revenues.

1    **D.    Integrated T&D Planning**

2    **Q:    WHAT DO YOU MEAN BY “INTEGRATING DSM AND DISTRIBUTED GENERATION**  
3       **INTO TRANSMISSION AND DISTRIBUTION PLANNING?”**

4    A:    When a utility, including Con Edison, finds that load on a component of its  
5       T&D system is approaching that element’s safe capability, the normal response  
6       is to determine the least-cost system improvement to relieve that overload. That  
7       response might be reconfiguring the system to shift load to less-heavily loaded  
8       equipment, adding capacity to the overloaded component (such as adding a  
9       transformer to an overloaded substation), or adding new components (such as  
10      running transmission to a new substation and creating new networks, to pick up  
11      load from overloaded existing substations and networks). All these strategies are  
12      included in the Infrastructure Investment Panel’s exhibits.

13           That conventional approach addresses only the capability half of the load-  
14      capability balance. The other way to relieve overloads is to decrease the load on  
15      the T&D system, either by reducing end-use load or by adding local distributed  
16      generation. Con Edison Witness Cedrone touches on this approach in his  
17      discussion of the DSM RFP.

18           Integrated T&D planning would start with the projections of load and  
19      capability as in the Ten-Year Load Relief Program documents provided in  
20      response to Staff Interrogatory 119. In addition to looking for the least-cost  
21      T&D response to serve potentially overloaded areas, integrated T&D planning  
22      would include a comprehensive process for developing DSM and distributed  
23      generation to reduce load and defer the need for the addition.

24   **Q:    WHAT ARE THE ADVANTAGES OF INTEGRATING DISTRIBUTED RESOURCES**  
25       **INTO T&D PLANNING?**

26   A:    Advantages including the following:

- 1       • A small decrement of load due to distributed resources may allow Con
- 2       Edison to defer a much larger and more-expensive capacity addition.
- 3       • Most T&D projects affect capability at only one level of the system
- 4       (subtransmission, substation, network feeders, line transformers), but a
- 5       load reduction at the meter will relieve loads all through the system.
- 6       • Distributed resources reduce the participating customers' bills for
- 7       generation energy and capacity, while T&D does not.
- 8       • Distributed resources, by reducing demand for market energy and capacity,
- 9       tend to reduce the market prices, benefiting all electricity consumers.

10   **Q: IS CON EDISON PLANNING TO SPEND A LARGE AMOUNT ON RELIEVING THE**  
 11   **CONSTRAINTS ON ITS T&D SYSTEM?**

12   A: Yes. Con Edison plans to spend over \$1.3 billion on load-related T&D  
 13   improvements over the next three years.

14   **Con Edison Projection of Growth-Related T&D Expenditures**

	2005	2006	2007	Total	Source
<i>Substation Capital</i>					
Load Relief	201,450	215,600	208,600	625,650	Exh IIP-2
<i>Substation O&amp;M</i>					
Growth	1,446	1,446	1,446	4,338	Exh IIP-3
<i>Transmission Feeders</i>					
Reconductoring	4,500	4,250		8,750	Exh IIP-4
Mt. Vernon Supply	1,000	2,000		3,000	Exh IIP-4
Feeder Ratings	500	500	500	1,500	Exh IIP-4
<i>Transmission O&amp;M</i>					
System Reinforce	7,621	7,621	7,621	22,863	Exh IIP-6
Diesels	3,500	3,500	3,500	10,500	Exh IIP-6
<i>Distribution Capital</i>					
Total	239,625	257,089	257,830	754,544	Exh IIP-7
Meter installatlon	-10,640	-10,845	-10,845	-32,330	Exh IIP-7
Meters	-10,715	-10,118	-10,362	-31,195	Exh IIP-7
<i>Total Excluding Meters</i>	438,287	471,043	458,290	1,367,620	

1   **Q: DOES CON EDISON'S DSM REQUEST FOR PROPOSALS CONSTITUTE**  
2   **INTEGRATED T&D PLANNING?**

3   A: The Company's June 2003 RFP is certainly a useful part of an integrated T&D  
4   planning approach. However, Con Edison has identified only 47 MW of the 125  
5   MW requested in the RFP, even a year after the RFP was issued, and none of the  
6   projects are under contract or in process. Accordingly, Con Edison needs to do  
7   more to encourage distributed generation and load relief. These steps should  
8   include hiring contractors to implement programs, rather than relying primarily  
9   on potential vendors to design the initiatives, as Con Edison Witness Cedrone  
10   describes in his testimony.

11           In addition, the DSM RFP covered only a portion of the substations and  
12   feeders that are facing overloads. For example, moderate reductions of load on  
13   the networks served by the East 63<sup>rd</sup> St. substations and East 75<sup>th</sup> St. substation  
14   No. 1 could avoid the need to establish East 75<sup>th</sup> St. substation No. 2. Con  
15   Edison should expand its targeted load reductions to all the areas in which load  
16   growth would otherwise be expected to require large T&D expenditures.

17           Finally, Con Edison should build on the limited success of the 2003 DSM  
18   RFP with additional solicitations for innovative projects and more-uniform  
19   planning for load reductions in all areas with impending overload conditions.

#### 20   **IV. Performance Standards**

21   **Q: WHY ARE PERFORMANCE STANDARDS APPROPRIATE FOR ELECTRIC-DISTRI-**  
22   **BUTION OPERATIONS?**

23   A: Performance standards are appropriate for reliability of power delivery in  
24   general. Delivery service is a natural monopoly, for which consumers have few  
25   alternatives. Under pressure to reduce costs, and with limited risk of loss of

1 disgruntled customers, distribution utilities might rationally under-invest in the  
2 reliability of service. Performance incentives balance the temptation to reduce  
3 costs, with the possibility of financial penalties for poor performance.

4 **Q: DOES THE RELIABILITY PERFORMANCE MECHANISM THAT THE COMMIS-**  
5 **SION ESTABLISHED IN CASE 00-M-0095 APPEAR TO BE WORKING PROPERLY?**

6 A: Yes. In its April 2004 RPM filing, Con Edison reported that during 2003 it had  
7 met its thresholds for interruption duration on both network and radial systems  
8 in all six of its performance areas and for interruption frequency on all the  
9 network areas and the radial systems for three boroughs. In Westchester and on  
10 the Staten Island radial system, Con Edison failed to meet the interruption  
11 frequency threshold, resulting in a penalty of \$1.5 million. That penalty should  
12 focus Con Edison's attention on improving reliability on those parts of the  
13 system, especially since correcting either of those failures would entitle Con  
14 Edison to receive an incentive payment for exceeding performance targets on  
15 Bronx radial system and the Brooklyn network and radial systems.

16 Con Edison may have started responding to these incentives. For the  
17 previous year, in an Order dated October 22, 2003, the Commission imposed a  
18 \$7.5 million penalty and found Con Edison to be ineligible for any rewards for  
19 exceeding performance targets. Con Edison's performance appears to be  
20 improving in response to the incentives.

21 The RPM appears to be working well and there is no reason to abandon or  
22 drastically modify it.

1   **V.   Streetlighting Performance Incentives**

2   **Q:   WHY ARE PERFORMANCE INCENTIVES PARTICULARLY IMPORTANT FOR**  
3       **STREETLIGHTING SERVICE?**

4   A:   In general, utilities have a significant inherent incentive to ensure that the vast  
5       majority of customers are able to receive power most of the time. Quite simply,  
6       utilities recover their costs primarily through usage-based charges on energy and  
7       maximum monthly demand; customers who are not connected do not produce  
8       revenues. The meter must spin in order for the utility to be paid.

9       Streetlighting is unusual in that the delivery bill charged to the customer  
10      is (in most cases) a monthly fee, rather than the result of a meter reading. That  
11      monthly fee under PASNY Delivery Rate I is currently \$5.22 per delivery point,  
12      plus \$9.83/kW-month of computed maximum demand.

13      The utility gets paid the facility charge for delivering power whether or not  
14      the utility's equipment is functioning and actually able to deliver power to the  
15      customer. Unless the utility faces the possibility of losing revenue, its incentive  
16      to repair defective distribution equipment serving streetlights is quite limited.  
17      Accordingly, in light of past problems (see below), an incentive mechanism that  
18      penalizes the utility for poor performance is necessary and appropriate to ensure  
19      that Con Edison will provide reliable streetlighting service.

20   **Q:   HAS THE CITY EXPERIENCED PROBLEMS IN GETTING CON EDISON TO**  
21       **RESPOND TO STREETLIGHTING OUTAGES?**

22   A:   Yes. This experience is detailed in the testimony of City Witness Steve Galgano.

23   **Q:   DO OTHER UTILITIES REDUCE THEIR STREETLIGHTING CHARGES IF THEY DO**  
24       **NOT PROVIDE SERVICE?**

25   A:   Yes. Various utilities provide different mixes of streetlighting services, including  
26       generation service, rental of poles and luminaires, maintenance of customer

1 equipment, and delivery service.<sup>16</sup> The nature and size of the discounts they  
2 provide for inadequate service varies with the services provided, among other  
3 factors. For example,

- 4 • For company-owned lamps that have not been restored by the night  
5 following the outage report, PSI Energy credits customers on its SL rate  
6 the daily average rate per lamp for each night of the outage.
- 7 • Under its Street Lighting Services schedule, South Beloit Water, Gas &  
8 Electric (an Alliant Energy company) credits customers for the kilowatt-  
9 hours not used during outages lasting for more than one whole night.
- 10 • In Iowa, MidAmerican must restore service under Rate No. 43 (Street  
11 Lighting) within 24 hours or pay customers a pro rata abatement of charges  
12 for the period of the interruption. If the outage is beyond MidAmerican's  
13 control, the company has 48 hours to restore service before the credit  
14 applies.
- 15 • Under Service Classification No. 1 (Street Lighting), Rochester Gas &  
16 Electric must repair or replace failed lamps within 24 hours (excluding  
17 Saturdays, Sundays and holidays) of receiving notice from the customer  
18 that the lamp is defective. For each night the lamp is not lighted, the  
19 customer receives a credit of <sup>1</sup>/<sub>365</sub> of the total annual rate for the failed lamp  
20 and fixture. Credits do not apply to outages due to conditions over which  
21 the Company has no control.
- 22 • When a lamp outage continues more than one complete night, payment to  
23 Wisconsin Public Service Corp. may be reduced by one thirtieth of the  
24 monthly Street-Lighting rate for each full night of outage.

---

<sup>16</sup>Con Edison generally provides only the delivery service.



- 1       • If service has not been restored within 24 hours from the time the outage  
2       is reported, Commonwealth Edison's Municipal Street Lighting customers  
3       are entitled to a pro rata abatement of charges for the full period of the  
4       interruption. (The company grants no credits for storm-related interrup-  
5       tions lasting less than 72 hours.)
- 6       • Fitchburg Gas & Electric's street light (SD) accounts receive, upon request,  
7       a deduction for outages lasting more than 72 hours from the time the  
8       Company is notified of the outage. The adjustment equals the monthly  
9       Delivery Service Charge multiplied by the fraction of total monthly  
10      burning time that the unit is not lighted.
- 11      • In Texas, Mutual Energy WTU provides a light-outage credit to Price-to-  
12      Beat Street Lighting (SLS and SIHE) customers if, upon receipt of written  
13      notification, the company fails to repair the street light within three days.  
14      The rebate equals the average rate per lamp times the number of nights of  
15      the outage.
- 16      • In Wisconsin, Northern States Power Company will credit a street-lighting-  
17      system-service account if, upon notification by the customer, illumination  
18      is not resumed within 24 hours. The credit is one thirtieth of the monthly  
19      rate for each night of non-illumination.
- 20      • Boston Edison credits its S-1 streetlighting customers per hour of outage  
21      during scheduled lighting hours, at 1.3¢/hour for lamps under 10,000  
22      lumens and 3.1¢/hour for all other lamps.
- 23      • If the outage exceeds three nights, for any reason, Commonwealth Electric  
24      reduces the lamp charges on a pro rata basis for the full period of the  
25      outage. This policy applies to both Company-owned (S-1) and customer-  
26      owned, Company-maintained (S-2) streetlights.

- 1       • For its Michigan streetlighting customers, Indiana-Michigan Power (a  
2       subsidiary of American Electric Power) reduces the monthly charge for  
3       each lamp by one thirtieth for each day of an outage beyond two working  
4       days. This policy applies to both Company-owned (Tariffs SLS and ECLS)  
5       and customer-owned (Tariff SLC) streetlights.
- 6       • For each lamp outage reported by a streetlighting customer (with service  
7       under S-1, S-2, S-3, S-5 and S-20), Massachusetts Electric reduces the  
8       annual price of the light by the ratio of the total outage hours to the annual  
9       burning time. Customers will not receive bill credits if the outages are due  
10      to conditions over which the Company has no control, provided that the  
11      Company makes timely repairs.
- 12     • For its New Jersey streetlighting customers (SC-4), Rockland Electric  
13      provides an outage credit if it fails to restore service within two nights. The  
14      allowance equals the monthly charge per night times the number of outage-  
15      nights beyond the first two.
- 16     • PECO Energy's suburban streetlighting customers on rate SL-S are entitled  
17      to a pro-rata reduction in the Variable Distribution Service and stranded-  
18      cost charges starting twelve hours after PECO receives written notice of a  
19      street-light failure (except for outages resulting from causes beyond the  
20      company's control).

21   **Q: WHAT DO YOU SUGGEST AS AN APPROPRIATE PERFORMANCE STANDARD FOR**  
22   **CON EDISON'S STREETLIGHTING SERVICE?**

23   A: I suggest that the Commission direct Con Edison to comply with Special  
24   Provision 6 (A)(2) of its PASNY tariff, which specifies that:

1 The respective quantities of lamps and auxiliary equipment in operation,  
2 the points of service termination at which controlled period service is  
3 supplied by the Company and the units of lighting equipment maintained  
4 or rented by the Company shall be determined upon the basis of the  
5 quantities in service on the 15th day of the calendar month for the purpose  
6 of computing the charges payable for such month.

7 Specifically, only equipment that is permanently connected to the Con  
8 Edison distribution system and receiving current on the 15<sup>th</sup> of each month  
9 should be included in the charges for the month.

10 In addition, if Con Edison does not permanent restore service within the  
11 45-day window recommended in the Staff Proposal in Case 04-M-0159, the  
12 Company should credit the customer an additional \$1 per lamp per day as a  
13 penalty to compensate the customer for the inability to use its equipment for an  
14 excessive period. That credit would amount over the course of a month to about  
15 \$30 per unserved lamp, which is still likely to be substantially less than Con  
16 Edison's saving from avoiding the repairs necessary to restore service to the  
17 lamp.

18 In either of the above situations, lights should be treated as receiving  
19 permanent service only when if they are connected through equipment meeting  
20 Con Edison's normal safety standards. In particular, lamps in areas with  
21 underground service must be served by underground lines, rather than makeshift  
22 and dangerous overhead shunts.

23 **Q: HAS CON EDISON BEEN RESPONSIVE IN PROVIDING SERVICE TO NEW STREET**  
24 **LIGHTS AND TRAFFIC SIGNALS?**

25 A: No. Mr. Galgano's testimony describes the problems that New York City has  
26 experienced in dealing with Con Edison on these issues.

27 **Q: DO YOU HAVE A RECOMMENDATION FOR IMPROVING THAT RESPONSIVE-**  
28 **NESS?**

1 A: Yes. Con Edison's delays in installing new service hook-ups, as described by  
2 Mr. Galgano, obviously are not acceptable. Although not specifically addressed  
3 in the Staff Proposal in Case 04-M-0159, it seems reasonable to require that Con  
4 Edison provide service within 90 days of notice from the City that a new facility  
5 has been installed. This target should be included as a measure for the perform-  
6 ance-incentive mechanism that the Staff has recommended in Case 04-M-0159.

7 **Q: DO YOU HAVE ANY OTHER RECOMMENDATIONS PERTAINING TO STREET-**  
8 **LIGHTING SERVICE?**

9 A: Yes. Mr. Galgano has highlighted a series of problems related to the streetlight  
10 register over the years. In this proceeding, Con Edison is seeking money to  
11 establish a new, automated register. I support Mr. Galgano's recommendations  
12 that the new billing system be developed jointly with the City and that it result  
13 in a system that allows the City to perform regular audits on what they have  
14 been billed. Further, I recommend that this joint task force report monthly to the  
15 Commission Staff to ensure that the new system is rapidly developed and  
16 deployed within six months of an Order in this proceeding. The new register  
17 should be ready for use within six months of the final order in this proceeding.  
18 Finally, the performance incentive mechanism being developed in Case 04-M-  
19 0159 should include a process for auditing the register at Con Edison's expense  
20 and penalties for failures by Con Edison to update the register in a timely and  
21 accurate manner.

## 22 **VI. Coordination of Street Openings**

23 **Q: WHY IS COORDINATION OF STREET OPENINGS NECESSARY?**

24 A: Streets with underground utility services are subject to disruption by the  
25 following parties:

- 1       • the electric utility (Con Edison, through its territory) to lay and repair
- 2       conduit and install service drops;
- 3       • the gas utility (Con Edison or KeySpan) to place and repair mains and
- 4       services;
- 5       • telephone and cable companies and private cable users, to place and repair
- 6       conduit;
- 7       • the water and sewer utilities (in New York City, both provided by the
- 8       City), to place and repair pipes;<sup>17</sup>
- 9       • the street-maintenance service (in New York City, the Department of
- 10      Transportation), to resurface and rebuild roads.

11           Each of these activities disrupts traffic, and all but the last damages the  
12      road surface. Minimizing the number of times a street must be opened reduces  
13      the total cost of opening and repairing the street, increases the street's usefulness  
14      to vehicles and pedestrians, improves traffic safety, and improves the  
15      appearance of the City. To the extent that street openings by Con Edison can be  
16      coordinated with other openings, Con Edison will reduce its costs and its  
17      customers will benefit.

18   **Q: HOW WOULD THIS COORDINATION AFFECT CON EDISON'S INTERFERENCE**  
19   **COSTS?**

20   A: Coordination should reduce interference costs. Con Edison is seeking an  
21      increase of \$16 million (from \$56 million to \$72 million) in Electric O&M  
22      Interference Costs (Boyle Testimony at 6). While I have not reviewed the  
23      propriety of that sizeable request, the magnitude of the proposed increase argues  
24      for a more aggressive, coordinated approach to street openings.

---

<sup>17</sup>All the utilities also need to install manholes and other access structures.

1   **Q: DO YOU HAVE ANY POSITION WITH RESPECT TO CON EDISON'S REQUEST TO**  
2   **UPDATE AND RECONCILE INTERFERENCE COSTS?**

3   A: Yes. Con Edison's forecast of electric interference O&M costs is approximately  
4   10% (78% of 13%) of the City's forecast of infrastructure-improvement  
5   expenditures (Boyle Testimony at 7–8). To the extent that the City's actual  
6   infrastructure-improvement expenditures differ from the current projection, Con  
7   Edison's expenditures would also be expected to differ. Hence, some  
8   reconciliation is appropriate.

9           Company Witness Boyle (at 15) suggests a reconciliation to Con Edison's  
10   non-labor interference expenditures if a multi-year rate plan is adopted. This  
11   proposal would leave the Company with no incentive to control the cost of the  
12   interference work that it must undertake. Instead, the Commission should  
13   reconcile based on the City's actual infrastructure-improvement expenditures.  
14   If the City completes more work than projected in Exhibit RSB-1, Con Edison  
15   would be allowed to defer the resulting non-labor excess costs under its formula  
16   for later collection. If the City completes less work, Con Edison would defer a  
17   credit for customers.

18   **Q: WHAT SHOULD CON EDISON DO TO CONTRIBUTE TO THE COORDINATION OF**  
19   **STREET OPENINGS?**

20   A: Con Edison should regularly share its plans for laying new conduit or taking  
21   other actions that require street openings with the appropriate City agencies and  
22   other utilities, and work cooperatively with those parties to develop schedules  
23   for coordinating street work and reducing the frequency of street openings.

24           Con Edison should also form a street-opening coordination group with the  
25   City and other utilities, and the group should report to the Commission on the  
26   progress and achievements of the coordination group at least every three

1 months. This is consistent with the New York City Energy Policy Task Force's  
2 recommendation (report at 43) for the establishment of "a collaborative capital  
3 infrastructure planning process between relevant city and state agencies and  
4 local utilities...to coordinate the major infrastructure projects for the City and  
5 State with local utilities."

6 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

7 **A:** Yes, at this time.